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EXAMINER	
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ART UNIT	PAPER NUMBER
2446	
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09/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/772,223	ISHII ET AL.	
	Examiner	Art Unit	
	Alicia Baturay	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 05 June 2009.

2. Claims 1, 4, 7 and 10-13 were amended.

3. Claims 15-28 were added.

4. Claims 1-28 are pending in this Office Action.

Response to Arguments

5. ***Applicant Argues:*** Weinert fails to teach or suggest "preventing...relocating of the certain resource **and** restructuring of the paths to the certain resource."

In Response: The examiner respectfully submits that the combination of Nguyen and Weinert teaches preventing the network structure controlling device from relocating functions of the certain resource (in another feature, the virtual partition system supports repartitioning while allowing access to the resources. Repartitioning can be used to add a new resource server to the web site with minimal impact on browsing users. If there are a large number of possible virtual partition values, only a very small percentage of the resources [are] locked during repartitioning. Further, the resources can still be read during repartitioning, avoiding disruption to the web site - see Weinert, col. 3, lines 31-38) and from restructuring of the paths related to the certain resource (resource managers direct requests to the proper resource server via the resource components. The table includes locks so that repartitioning operations can be performed while avoiding synchronization problems – see

Weinert, col. 12, line 65 – col. 13, line 3). This renders the rejection proper, and thus the rejection stands.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Regarding claim 1, the phrase "wherein the relocating of the at least one node function at least one new node location comprises" renders the claim indefinite because it is unclear what functionality is being claimed.

8. Regarding claim 23, the phrase "a node resource status data collecting unit that receives first data on status of a node resource that a device constituting a network has, the node resource being a resource used for providing a communication service or transferring data" renders the claim indefinite because it is unclear what "has" is referring to.

9. Regarding claim 23, the phrase "an adaptive control necessity determining unit that determines on the basis of the first data and the second data stored in the network resource status data storing unit, or…" renders the claim indefinite because it is unclear what is being determined on the basis of the first data and the second data.

10. Regarding claim 23, the phrase "wherein determination of at least one of the new communication path or the first and second devices is dependent on determination of the other of the first and second devices or the new communication path" renders the claim indefinite because it is unclear what the result of the "determination of the other of the first and second devices or the new communication path" will be or how it is computed.

11. Regarding claim 28, the phrase "another network configuration managing device constituting the network" renders the claim indefinite because it is unclear how if one network configuration managing device constitutes the entire network, how another network configuration managing device can also constitute the entire network.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1-6, 8 and 10-13, 15-25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (WO 02/29427) and further in view of Vange (U.S. 2002/0002603).

Nguyen teaches the invention substantially as claimed including a method and system of providing for central control and intelligent routing of data network traffic where a server is operatively connected to a network and is capable of receiving information regarding network status, specifically capable of recognizing network congestion, formulating a solution to the network congestion and re-configure network traffic to reroute around network congestion (see Abstract).

14. With respect to claim 1, Nguyen teaches a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node location of at least one node function, and relocating the at least one node function at the at least one new node location (Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in response to an instruction of restructuring (Nguyen, page 26, line 20 – page 27, line 15), and an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both

said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45) and configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

15. With respect to claim 2, Nguyen teaches the invention described in claim 1, including a communication network system, further comprising:

Service controlling devices each of which is one of said functional nodes and is capable of changing its own functions and data used for the functions, and comprises resources for providing communication services or data transfer services, data transferring devices each of which is one of said functional nodes and is capable of changing its own functions, data used for the functions and connection statuses of paths for data communications, and comprises resources for providing communication services or data transfer services (Nguyen, page 18, line 19 – page 20, line 11), and a network structure controlling device which is connected to said service controlling devices and to said data transferring devices, wherein, said network structure controlling device comprises said resource managing unit, said node function location controlling unit, said path structure controlling unit and said adaptive control determining unit (Nguyen, page 26, lines 1-19).

16. With respect to claim 3, Nguyen teaches the invention described in claim 1, including a communication network system, further comprising:

Service controlling devices each of which is one of said functional nodes and is capable of changing its own functions and data used for the functions, and comprises resources for providing communication services or data transfer services, data transferring devices each of which is one of said functional nodes and is capable of changing its own functions, data used for the functions and connection statuses of paths for data communications, and comprises resources for providing communication services or data transfer services (Nguyen, page 18, line 19 – page 20, line 11), network structure controlling devices which are distributed in said network, each of which comprises said node function location controlling unit, said path

structure controlling unit and said adaptive control determining unit (Nguyen, page 26, lines 1-19), and a lock controlling unit for controlling locks of resources, when each of the resources should be controlled by only one of said network structure controlling devices to achieve the relocation or the restructuring, for avoiding each of the resources being controlled by more than one of said network structure controlling devices (Nguyen, page 26, lines 1-19).

17. With respect to claim 10, Nguyen teaches an adaptive control method comprising: a node resource status monitoring step for a service controlling device and a data transferring device, which are included in a communication network system, to monitor statuses of node resources, which are resources for providing communication services or data transfer services, and to transmit data indicating said statuses of node resources, a link resource status monitoring step for said data transferring device to monitor statuses of link resources, which are resources for providing data transfer services, and to transmit data indicating said statuses of link resources, a network resource status collecting step for a network resource status managing device in said communication network system to receive and store said data indicating said statuses of node resources transmitted in said node resource status monitoring step and to receive and store said data indicating said statuses of link resources transmitted in said link resource status monitoring step (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), an adaptive control determining step for a network structure controlling device in said communication network system to determine whether it is necessary to relocate functions and data for the functions of said service controlling device or

of said data transferring device, a planning step where said network structure controlling device makes a plan of relocation of the functions and the data for the functions so that said node resources and said link resources can be used in an optimum condition, and transmits an instruction to instruct said relocation of the functions and the data for the functions to said service controlling device or to said data transferring device, when it is determined to be necessary to relocate the functions and the data for the functions in said adaptive control determining step, and an optimizing step where said service controlling device or said data transferring device changes its functions and data for the functions in accordance with said instruction to instruct said relocation of the functions and the data for the functions (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45) and configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

18. With respect to claim 11, Nguyen teaches the invention described in claim 10, including an adaptive control method wherein:

In said planning step, said network structure controlling device further transmits, to said network resource status managing device, a request for a lock control for avoiding said node resources and said link resources, which are controlled by said network structure controlling device after the relocation, being controlled by another network structure controlling device, when it is determined to be necessary to relocate the functions and the data for the functions in said adaptive control determining step, and said adaptive control method further comprises a lock controlling step for said network resource status managing device to receive the request for a lock control which is transmitted in said planning step, and to control locks of said node resources and said link resources in accordance with the request for a lock control (Nguyen, page 26, lines 1-19).

19. With respect to claim 12, Nguyen teaches the invention described in claim 11, including an adaptive control method wherein:

In said planning step, said network structure controlling device makes an optimum plan of relocation of the functions and the data for the functions on the basis of data on a draft plan of relocation of the functions and the data for the functions (Nguyen, page 24, line 16 – page 26, line 19).

20. With respect to claim 13, Nguyen teaches the invention described in claim 1, including a communication network system wherein the node function location controlling unit analyzes

current available link resources based on the statuses of the link resources in said network managed by the resource managing unit (Nguyen, pages 18, line 19 – page 19, line 2); wherein the node function location controlling unit determining interim node locations of interim node function; wherein the node function location controlling unit transmits the interim node locations of the interim node functions to the path structure controlling unit; wherein the node function location controlling unit receives data of link path restructuring from the path structure controlling unit; and wherein the node function location controlling unit finalizes the new node locations of the node functions based on the data of the link path restructuring in order to achieve an optimum condition (Nguyen, page 24, line 16 – page 26, line 19).

21. With respect to claims 15 and 19, Nguyen teaches the invention described in claims 1 and 4, including a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node location of at least one node function, and relocating the at least one node function at the at least one new node location (Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in

response to an instruction of restructuring (Nguyen, page 26, line 20 – page 27, line 15), and an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19) and wherein the path structure controlling unit determines a new communication path (Nguyen, page 22, line 3 – page 26, line 19); wherein the node function location controlling unit receives the data on the new communication path determined by the path structure controlling unit, and determines the first device and the second device on the basis of the data on the new communication path; and wherein the path structure controlling unit receives data on the first device and the second device determined by the node function location controlling unit, and determines the new communication path on the basis of the data on the first device and the second device (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45), configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47) and communication network system wherein the node function controlling unit determines a first device from which to transfer the at least one node function to a second device (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

22. With respect to claims 16, 20 and 28, Nguyen teaches the invention described in claims 15, 19 and 23, including a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node location of at least one node function, and relocating the at least one node function at the at least one new node location

(Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in response to an instruction of restructuring (Nguyen, page 26, line 20 – page 27, line 15), and an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45), configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47) and a communication

network system wherein the function of the second device to be reconfigured comprises at least one of a firewall function, a mobility control function, a call control function, a data copy function, a multicast function, a mobile anchor function, and a mobile buffering function (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

23. With respect to claims 17 and 21, Nguyen teaches the invention described in claims 1 and 4, including a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node location of at least one node function, and relocating the at least one node function at the at least one new node location (Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in response to an instruction of restructuring (Nguyen, page 26, line 20 – page 27, line 15), and

an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45), configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47) and a communication network system wherein the at least one new node location receives data indicative of the at least one node function, the data enabling the at least one node function so that node functions processed at the at least one new node location are changed (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

24. With respect to claims 18 and 22, Nguyen teaches the invention described in claims 17 and 21, including a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node location of at least one node function, and relocating the at least one node function at the at least one new node location (Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in response to an instruction of restructuring (Nguyen, page 26, line 20 – page 27, line 15), and an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both said instruction of

restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45), configured to determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47) and a communication network system wherein the node function location controlling unit transfers the at least one node function from a first node to the at least one new node (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

25. With respect to claim 23, Nguyen teaches a network configuration managing device comprising: a node resource status data collecting unit that receives first data on status of a node resource that a device constituting a network has, the node resource being a resource used for providing a communication service or transferring data; a link resource status data collecting unit that receives second data on status of a link resource of a device constituting the network, the link resource being a resource used for transferring data; a network resource status data storing unit that stores the first data and the second data (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11); an adaptive control necessity determining unit that determines on the basis of the first data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the node resource from an external device, whether it is necessary to perform relocation of a function of a device constituting the network, and determines on the basis of the first data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the link resource from an external device, whether it is necessary to perform reconfiguration of a communication path formed in the network (Nguyen, page 20, line 18 – page 21, line 13); a node function location controlling unit that, if it is determined by the adaptive control necessity unit that relocation of a function of a device constituting the network is necessary, determines a first device constituting the network whose data for providing a node function is to be transferred and a second device constituting the network that receives the data for providing a node function from the first device (Nguyen, page 16, line 3 – page 17, line 5); and a link configuration controlling unit that, if it is determined by the adaptive control necessity determining unit that reconfiguration

of a communication path formed in the network is necessary, determines a new communication path to be formed in the network; wherein determination of at least one of the new communication path or the first and second devices is dependent on determination of the other of the first and second devices or the new communication path (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach reconfiguring a function of the second device using data for providing a node function.

However, Vange teaches reconfigures a function of the second device using data for providing a node function (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable reconfiguring a function of the second device using data for providing a node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

26. With respect to claim 24, Nguyen teaches the invention described in claim 23, including a network configuration managing device wherein the link configuration controlling unit generates a provisional determination of the new communication path; and wherein the node function location controlling unit generates a final determination of the first device and the second device based on the provisional determination of the new communication path (Nguyen, page 16, line 3 – page 17, line 5).

27. With respect to claim 25, Nguyen teaches the invention described in claim 24, including a network configuration managing device wherein the node function location controlling unit generates a provisional determination of the first device and the second device wherein the node function location controlling unit sends the provisional determination of the first device and the second device to the link configuration unit (Nguyen, page 16, line 3 – page 17, line 5); and wherein the link configuration controlling unit generates a final determination of the new communication path based on the provisional determination of the first device and the second device (Nguyen, page 22, line 3 – page 26, line 19).

28. Claims 4-6 and 8 do not teach or define any new limitations above claims 1 and 9-12 and therefore are rejected for similar reasons.

29. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Vange and further in view of Weinert et al. (U.S. 7,454,516).

30. With respect to claim 7, Nguyen teaches a communication network system comprising: a resource managing unit for managing statuses of node resources in a network and statuses of link resources in said network (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit, determining at least one new node

location of at least one node function, and relocating the at least one node function at the at least one new node location (Nguyen, page 21, line 9 – page 26, line 19), a path structure controlling unit for restructuring a structure of paths in said network, in accordance with said statuses of link resources which are managed by said resource managing unit (Nguyen, page 20, line 18 – page 21, line 13), in response to an instruction of restructuring (Nguyen, page 26, line 20 - page 27, line 15), and an adaptive control determining unit configured for determining whether to transmit said instruction of relocation to said node function location controlling unit, configured to determine whether to transmit said instruction of restructuring to said path structure controlling unit, and configured to determine whether to transmit both said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Nguyen, page 22, line 3 – page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (Nguyen, page 24, line 16 – page 26, line 19).

Nguyen does not explicitly teach changing programming of the at least one new node location with the at least one node function.

However, Vange teaches wherein the relocating of the at least one node function at least one new node location comprises changing programming of the at least one new node location with the at least one node function (Vange, page 4, paragraph 45) and configured to

determine whether to transmit both said instruction of relocation to said node function location controlling unit (Vange, pages 4-5, paragraphs 46 and 47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable changing programming of the at least one new node location with the at least one node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

The combination of Nguyen and Vange does not explicitly teach locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource.

However, Weinert teaches a lock controlling unit, in response to a request for a lock control, for a locking control of a certain resource thereby preventing the network structure controlling device from relocating functions of the certain resource and from restructuring of the paths related to the certain resource (Weinert, col. 10, line 62 – col. 11, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Nguyen and Vange in view of Weinert in order to enable locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource. One would be motivated to do so in order to attempt to avoid overload of any single machine by directing only a percentage of the incoming requests for web pages to any one content server.

31. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Weinert.

32. With respect to claim 9, Nguyen teaches a network resource status managing device comprising: a resource status collecting unit for collecting data on statuses of node resources and data on statuses of link resources in a network through said network, a network resource status storing unit for storing said data on statuses of node resources and said data on statuses of link resources which are collected by said resource status collecting unit (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a network structure controlling device for relocating functions of nodes or for restructuring paths in said network (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource.

However, Weinert teaches a lock controlling unit, in response to a request for a lock control, for a locking control of a certain resource thereby preventing the network structure controlling device from relocating functions of the certain resource (Weinert, col. 3, lines 31-38) and from restructuring of the paths related to the certain resource (Weinert, col. 10, line 62 – col. 11, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Weinert in order to enable locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource. One would be motivated to do so in order to attempt to

avoid overload of any single machine by directing only a percentage of the incoming requests for web pages to any one content server.

33. With respect to claim 14, Nguyen teaches the invention described in claim 9, including a network resource status managing device comprising: a resource status collecting unit for collecting data on statuses of node resources and data on statuses of link resources in a network through said network, a network resource status storing unit for storing said data on statuses of node resources and said data on statuses of link resources which are collected by said resource status collecting unit (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11), a network structure controlling device for relocating functions of nodes or for restructuring paths in said network (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource.

However, Weinert teaches a lock controlling unit, in response to a request for a lock control, for a locking control of a certain resource thereby preventing the network structure controlling device from relocating functions of the certain resource (Weinert, col. 3, lines 31-38) and from restructuring of the paths related to the certain resource (Weinert, col. 10, line 62 – col. 11, line 2) and wherein the network structure controlling device comprises a plurality of network structure controlling devices, wherein a certain network structure controlling device controls the certain resource, and wherein the lock controlling unit locks control from a remainder of the plurality of network structure controlling devices so that only

the certain network structure controlling device controls the certain resource (Weinert, col. 12, line 65 – col. 13, line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Weinert in order to enable locking control of a certain resource preventing the network structure controlling device from relocating functions of the certain resource. One would be motivated to do so in order to attempt to avoid overload of any single machine by directing only a percentage of the incoming requests for web pages to any one content server.

34. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Vange and further in view of Mangipudi et al. (U.S. 6,728,748).

35. With respect to claim 26, Nguyen teaches the invention described in claim 23, including a network configuration managing device comprising: a node resource status data collecting unit that receives first data on status of a node resource that a device constituting a network has, the node resource being a resource used for providing a communication service or transferring data; a link resource status data collecting unit that receives second data on status of a link resource of a device constituting the network, the link resource being a resource used for transferring data; a network resource status data storing unit that stores the first data and the second data (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11); an adaptive control necessity determining unit that determines on the basis of the first

data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the node resource from an external device, whether it is necessary to perform relocation of a function of a device constituting the network, and determines on the basis of the first data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the link resource from an external device, whether it is necessary to perform reconfiguration of a communication path formed in the network (Nguyen, page 20, line 18 – page 21, line 13); a node function location controlling unit that, if it is determined by the adaptive control necessity unit that relocation of a function of a device constituting the network is necessary, determines a first device constituting the network whose data for providing a node function is to be transferred and a second device constituting the network that receives the data for providing a node function from the first device (Nguyen, page 16, line 3 – page 17, line 5); a link configuration controlling unit that, if it is determined by the adaptive control necessity determining unit that reconfiguration of a communication path formed in the network is necessary, determines a new communication path to be formed in the network; wherein determination of at least one of the new communication path or the first and second devices is dependent on determination of the other of the first and second devices or the new communication path (Nguyen, page 22, line 3 – page 26, line 19) and wherein the link configuration controlling unit generates a final determination of the new communication path based on the determination of the first device and the second device (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach reconfiguring a function of the second device using data for providing a node function.

However, Vange teaches reconfigures a function of the second device using data for providing a node function (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable reconfiguring a function of the second device using data for providing a node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

The combination of Nguyen and Vange does not explicitly teach a provisional determination of the first and second devices.

However, Mangipudi teaches a network configuration managing device wherein the node function location controlling unit generates a provisional determination of the first device and the second device (Mangipudi, col. 13, lines 45-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Nguyen and Vange in view of Mangipudi in order to enable a provisional determination of the first and second devices. One would be motivated to do so in order to lessen a negative quality experience for users.

36. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Vange and further in view of Aoki et al. (U.S. 2003/0028616).

37. With respect to claim 27, Nguyen teaches the invention described in claim 23, including a network configuration managing device comprising: a node resource status data collecting unit that receives first data on status of a node resource that a device constituting a network has, the node resource being a resource used for providing a communication service or transferring data; a link resource status data collecting unit that receives second data on status of a link resource of a device constituting the network, the link resource being a resource used for transferring data; a network resource status data storing unit that stores the first data and the second data (Nguyen, Fig. 3, elements 220 and 250; page 18, line 19 – page 19, line 11); an adaptive control necessity determining unit that determines on the basis of the first data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the node resource from an external device, whether it is necessary to perform relocation of a function of a device constituting the network, and determines on the basis of the first data and the second data stored in the network resource status data storing unit, or in accordance with a request for an adaptive control of the link resource from an external device, whether it is necessary to perform reconfiguration of a communication path formed in the network (Nguyen, page 20, line 18 – page 21, line 13); a node function location controlling unit that, if it is determined by the adaptive control necessity unit that relocation of a function of a device constituting the network is necessary, determines a first device constituting the network whose data for providing a node function is to be transferred and a second device constituting the network that receives the data for providing a node function from the first device (Nguyen, page 16, line 3 – page 17, line 5); and a link configuration controlling unit that, if it is determined by

the adaptive control necessity determining unit that reconfiguration of a communication path formed in the network is necessary, determines a new communication path to be formed in the network; wherein determination of at least one of the new communication path or the first and second devices is dependent on determination of the other of the first and second devices or the new communication path (Nguyen, page 22, line 3 – page 26, line 19).

Nguyen does not explicitly teach reconfiguring a function of the second device using data for providing a node function.

However, Vange teaches reconfigures a function of the second device using data for providing a node function (Vange, pages 4-5, paragraphs 45-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen in view of Vange in order to enable reconfiguring a function of the second device using data for providing a node function. One would be motivated to do so in order to readily scale upwardly and downwardly to meet the needs of a particular application.

The combination of Nguyen and Vange does not teach preventing resources from being controlled by another network configuration managing device.

However, Aoki teaches a network configuration managing device further comprising an exclusive control enabling unit that, if it is determined by the adaptive control necessity determining unit that relocation of a function of a device constituting the network is necessary, prevents a node resource and a link resource from being controlled by another network configuration managing device constituting the network (Aoki, page 4, paragraph 58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Nguyen and Vange in view of Aoki in order to enable preventing resources from being controlled by another network configuration managing device. One would be motivated to do so in order to avoid or lighten a failure generated in a web proxy device of mainly a large scale.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia Baturay
September 18, 2009

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2446